Click2Enter-I

Operator's & Installer's Guide

Version 3.0

Software Version 1.17

Click
Click
(you're in)

FCC Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

In accordance with FCC requirements, changes or modifications not expressly approved by Click2Enter, Inc. could void the user's authority to operate this product.

CAUTION: Scanning is a great pastime. You can listen to exchanges between police, fire departments, ambulances, military organizations, government agencies, private companies, aircraft, and amateur radio stations. Owning and operating this scanner is legal in so far as you do not intentionally intercept the following electronic and wire communications:

- Cellular, cordless, or private telephone conversations transmit communications through means or telephone signal transmissions.
- Pager transmissions.
- Scrambles of encrypted transmissions.

As amended the Federal Electronics Communications Privacy Act (ECPA) states you could be fined and/or imprisoned for intentionally listening to, using or disclosing the contents of such a transmission unless a party in the communication has consented-unless such and activity is otherwise legal.

In some areas/states it is unlawful to operate a scanner. Please check the laws in your areas as they may change from time to time. Click2Enter, Inc. assumes no liability for the operation of this scanner.

NOTE: This is a required FCC standard operational disclaimer. The Click2Enter product line is not intended to be used for "scanning" as intended by this disclaimer.

Click2Enter®

Click2Enter, Inc.

Designing and Manufacturing Access Control Technology For the 21st Century

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1 Introduction

Overview

Click2Enter-I (C2E-I) does away with cumbersome keys, access control codes, and remote control actuators, because every emergency response vehicle and responder already carries the key—their mobile or portable radio transceiver.

Click2Enter-I was developed to provide public safety personnel (or any authorized user) immediate access to electronically controlled gates, common area doors, roll-up doors, or any electronically controlled access control device. Other authorized users can use Click2Enter-I as long as they have programmed access into its frequency bank and have a radio transceiver. Click2Enter-I, compared with other emergency access control systems, will set the industry standard for many years to come.

The Click2Enter-I combines scanner/receiver technology with control technology to act as a radio-controlled key to open access control devices (gates or security control mechanisms), allowing public safety agencies (or any authorized users) immediate access for dealing with emergencies as they occur. All that is required to activate the Click2Enter-I is that the operator be in proximity to the unit, and use two short deliberate pulses of their radio transceiver to initiate an instant activation/entry.

A final comment relating to SAFETY. Never use the C2E device without proper safeties in place. Safety devices and terminology are clearly defined under the UL 325 Guidelines. We recommend that you have reviewed or are aware of the information covered under this very important document.

Should you want to DETOUR directly to the set-up and programming section may we suggest beginning with **Chapter 5 on Page 20**.

Features

- Scanner / receiver radio.
- Variable activation range via programming.
- One or two radio transmission “clicks” for activation.
- 50 channel capacity.
- Mutual aid compatible.
- Independent relay control for roll-up doors.
- Bright activation LED and power LED.
- Time/day/agency memory recall.
- CTCSS, PL/DPL private line (PL) programming capability.
- Auto detect and load of private line codes.
- Compatible with analog or digital radio transmitters, using private line sub-audible transmissions.
- Will operate with carrier only for use with digital radio systems.
- Able to use talk around carriers (car to car) of trunk line radio systems.
- Able to operate in an “on-trunk” mode trunk’ed radio systems (single pulse mode only).
- Able to receive radio transmissions to include 900 MHz bands.
- Able to use aircraft AM band frequencies for airport access control operations.
- Latch open and close features.
- Enhanced user-programmable latch open feature lets you specify gate open periods from one minute to unlimited.
- Latch back and hold feature for extra safety.
- Ability to handle high power mobile transmitters and lower power hand held portable transmitters.
- Proprietary programming software built into each unit.
- Field programmable using a laptop computer or PDA device with terminal emulation software and null modem adaptor.
- Programmable via RS-232 interface.
- User-selected PIN for security of programmed frequencies.
- Able to capture and exhibit activation data log, via software.
- Computer software programmable using standard terminal emulation software (Windows Hyper-Terminal).
- Uses 12V to 24V DC Power Supplies(Click2Enter-I power will be a regulated 12V DC @ 500mA).
- Lightning surge current protected (current/surge limiting circuit).
- Reflective logo for night identification.
- Unit enclosed in a NEMA Type 4 box, with security screws supplied.
- Relay or dry contact ready.
- Extra set of relay contacts to activate a multitude of devices.
- Five year manganese dioxide lithium battery for memory backup.
- Retrofit kits available for operation beyond temperature range specifications (hot & cold).

2 Operation

Overview

Click2Enter-I takes advantage of state of the art electronics presently being designed into scanner radio technology. The modified scanner/radio technology provides public safety agencies a quick, safe, reliable, and stealthy means to activate gates or security control mechanisms.

Fire Departments, Police/Sheriff Departments, Ambulance/Rescue Companies and other public safety agencies are issued radio frequencies by the FCC for their restricted use only. Possession of transmitting devices for non-authorized personnel is tightly controlled and transmitting on these frequencies is against the law (Federal & State statutes). The public's right to receive these emergency agency communications is not restricted, making it legal to possess emergency response scanning devices.

How it Works

The Click2Enter-I uses technology that is inherent in most all radio broadcast equipment and adapts this technology to work as a control mechanism. The security of the Click2Enter-I is increased by requiring a verification of the FCC assigned carrier frequency and the agency assigned sub-audible communication (private line code). So it takes two separate verifications to cause an activation of the unit.

An "auto-load" feature enables the Click2Enter-I sub-audible PL (private line) code to be auto detected and auto loaded. The installer/programmer can choose to enable the auto-load feature, or can manually assign the PL code.

Click2Enter-I stores a running activation log in memory for operator recall. The Click2Enter-I system allows access by any public safety agency or authorized users as long as a frequency they use is programmed into its memory.

Activation Sequence

The entire activation sequence takes less than four seconds. The operator can either be on foot and using a portable radio, or in a moving vehicle, using portable or mobile radio. NOTE: Most agencies prefer the SINGLE Pulse Mode over the DOUBLE Pulse Mode.

Double Pulse Mode Approach the C2E-I unit, then:

1. Hold the push-to-talk button until the activation light illuminates.
2. When the light shuts off, release the push-to-talk button.
3. When the activation light illuminates again, hold the push-to-talk button again until the light shuts off.
4. When the light goes out, release the button.
5. The light blinks and the gate opens and/or the security system deactivates.

Single Pulse Mode Approach the C2E-I unit, then:

1. Hold the push-to-talk button until the activation light illuminates.
2. When the light shuts off, release the push-to-talk button.
3. The light blinks and the gate opens and/or the security system deactivates.

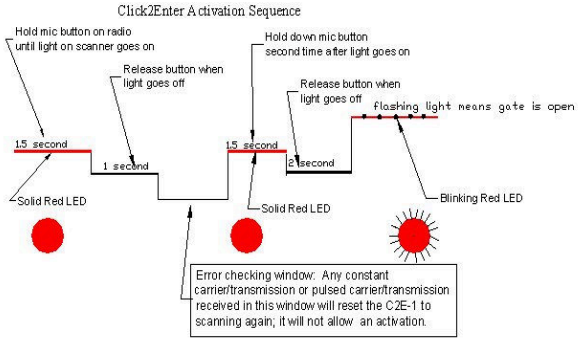
Click2Enter Activation Sequence
Hold mic button on radio until light on scanner goes on
Release button when light goes off
Hold down mic button second time after light goes on
Release button when light goes off
flashing light means gate is open
1.5 second
1 second
1.5 second
2 second
Solid Red LED
Solid Red LED
Blinking Red LED
Error checking window: Any constant carrier/transmission or pulsed carrier/transmission received in this window will reset the C2E-1 to scanning again; it will not allow an activation.

Figure 1. Double Pulse Activation Diagram

Note: The activation light will blink while the gate is being opened. If the gate does not begin to open, once the activation light begins to blink, it is recommended that the Click2Enter-I be allowed to reset, then retry the activation sequence shown above. If the Click2Enter-I still fails to activate the gate, while the activation light is blinking, a decision to open the gate by force or by using other systems/devices will have to be made.

Training Supplement: Click2Enter, Inc. offers technical training support via our web-site for the activation sequence. Contact us for instructions access the simulator.

Initial System Setup Guidelines

Items for the public safety official to consider when gathering information to be programmed into the Click2Enter-I (C2E) emergency access control units being deployed in your city, county or region (global programming data):

1. Activation "Pulse" Mode; Either Single Pulse or Double Pulse
   The C2E can operate in either a single pulse or double pulse mode. This feature can be set on a channel by channel basis, however it is recommended that you generally assign one operational mode for your city, county or region. Using one operation pulse mode assures that the user/s will not be confused in the field.
   - *Double Pulse Mode*: In this mode two distinct pulses are required to operate the device. Using this mode will generally prevent almost all unwanted activations. This mode is not able to be used in conjunction with trunk'ed radio systems that don't have simplex or off trunk frequencies allocated. Training support for double pulse activation is available at our website: **www.click2enter.net/tutorial** and enter the following password: **c2e10-36** and follow the instructions for the simulator.
   - *Single Pulse Mode*: This allows for an on-trunk activation of the C2E (in most cases). Simply key the transceiver once and release after the LED goes off and the C2E opens. The potential for unwanted activation is increased slightly in this mode, thus we encourage a tighter operational range setting to support single pulse activation. All of the allocated trunk frequencies will need to be programmed into the Click2Enter in order to work in an "on-trunk" mode. (PREFERRED METHOD OF OPERATION).

TIP:

SINGLE PULSE OPERATION MOST WIDLEY USED

2. Frequency Assignment
   Selection of a frequency to operate the C2E does not mean that you lose the ability to continue to use it for communication purposes. This just means that the user/s of the system will know what channel to select in order to operate any C2E deployed in your city, county, or region.

Since the C2E can manage up to 50 different frequency assignments you can generally setup your system to accommodate many different channels/agencies. Mutual aid agencies should be considered in your basic set of allocated activation frequencies to include: Fire, EMS, Sheriff, Police, Regional Fire, Public Works etc.

- In a standard radio system you might consider allocating a main (repeat) carrier and another direct (non-repeat) frequency. This would support routine and non-routine activations of the C2E.
- The C2E requires the use of "TRANSMIT" (TX) not receive (RX) carrier/frequency.
- Private Line (PL) or Digital Private Line (DPL) coding. The C2E can accommodate either a PL or DPL code assigned along with your selected operational activation frequency. These codes offer a little more specific selectivity and enhanced security, however they are not mandatory. Be aware that most public safety agencies opt not to allocate them as the level of operational security provided by the carrier frequency is clearly acceptable for gate activation.

3. Latch Back

   Consideration should be given to whether or not you want the C2E to hold open the gate for a pre-set period of time to support the arrival of back-up or support engines. The C2E can hold open the gate in increments of: 1) 1-59 minutes; 2) 1 Hr to 15 Hrs; 3) Stay Open permanently with a hard reset required. The C2E can also, once in latch back mode, be set to either "override" or "non-override" mode.

   - *Override*: Simply if latch back is initiated the system can be pulsed another time and the gate will close; the system opens and closes on command.
   - *Non-Override*: When set in this mode the C2E will hold the gate open for the predetermined amount of time and not allow an override request to close. The activation LED blinks at a 50% duty cycle to indicate that it will not accept another pulse request pending completion of the countdown.

4. Range of Operation
   Typically the portable setting for operation is approximately 20 Ft., which places the mobile radio operation (vehicle) at about 80 Ft. to 100 Ft. Greater distances of operation can be achieved, but consideration should be given to the potential of unwanted operation with greater distances. Generally, the 20 Ft. portable and 80 Ft. to 100 Ft. mobile settings do well for all emergency access situations.

5. Password Assignments
   The C2E supports two levels of password assignment to facilitate programming and access to stored data:
   - The LEVEL 1 password might be allocated to the installing dealer.
   - The LEVEL 2 password is typically used or allocated to the public safety agency of jurisdiction for purposes of assigning their own system-wide point of access. This system wide access facilitates access to any unit in the field, by a representative of the agency of jurisdiction, to make changes to the C2E or allow access to the stored data.

Portable Radio Operation

The Click2Enter-I is designed to operate most efficiently with the transmitting radio oriented in the upright position (vertical radio antenna). The range and effectiveness of the radio will be greatly altered in any other configuration.

Note: The Click2Enter-I will operate with a portable radio oriented in either the vertical or horizontal plane, however, the base range setting of 10 feet was set holding the radio vertically. If the radio is held horizontally, the base range setting will be increased to ±15 feet.

WARNING
Do not drill holes into the enclosure or in any way modify the NEMA 4x box, this will VOID your warranty!

3 Installation

Temperature Range

Click2Enter-I has a minimum and maximum operating temperature specification:

Maximum Range: 140°F
For most high temperature applications, the maximum rated temperature of the unit is 140° F. For best operation, mount the unit in a location where it is shaded from direct sunlight. Should it be necessary to mount the unit in the direct sun, you may purchase an after-market sun bonnet retrofit device from Click2Enter, Inc. You may also add your own shade device to adequately shade the Click2Enter-I and expand its upper limit temperature range.

Minimum Range: 14°F
The low end operations of the Click2Enter-I is 14°F. For installations that may subject the Click2Enter-I to a temperature range below this limit, you may purchase an after-market retrofit heater kit from Click2Enter, Inc. The heater retrofit kit will allow operations well below 0°F.

Mounting

It is highly recommended that the Click2Enter-I be mounted so that the operator can clearly see the operation LED and power LED. Both of these LED's provide important feedback to the operator. Also, Click2Enter-I has a reflective logo on its front panel to assist in immediate identification during night use. The C2E-I can be mounted on a post placing it out of reach in areas prone to vandalism. Another mounting location can be behind the gate thus keeping it out of reach (**Note: The C2E-I needs to be seen to be operated**).

The C2E-I plastic box comes with four mounting brackets. We suggest that you use security head screws or bolts when mounting the unit, to prevent theft. The bottom pre-drilled conduit hole supports ¾" connectors.

For projects that require a more low profile approach the C2E-I can be mounted out of sight and a smaller external LED/Activation box (kit) can be used. Call your Wholesaler, Dealer, or Click2Enter, Inc. to ask about this additional kit.

Distance Ranges

The operational activation range of the Click2Enter-I can be configured in many different ways.

A chart to assist you in assigning an arbitrary distance setting of 10 feet for installations in the field is located in Table 1 below. This is a guide for you to set the general distance based on the frequency range of a 4W portable radio operating on the individual channel of assignment. These settings were made in optimal conditions. The values in your application may vary. The base range settings are not absolute. The settings in Table 1 were obtained using a 4W portable unit at a distance of 10 feet.

Note: For VHF low, a 5W radio was used.

Should the Click2Enter-I not activate at a reasonable distance or be too sensitive causing spurious activation to occur, you may want to change these settings.

Table 1: Click2Enter-I Gain/Ranging Base Settings*

Portable Radio Frequency Band	*Frequency Used*	*Click2Enter-I Gain/Range Setting*[1]
VHF Low (5W) Radio	51.0000 MHz	**75**
VHF High (4W) Radio	154.445 MHz	**90**
UHF Low (4W) Radio	464.500 MHz	**85**
UHF High (4W) Radio	853.150 MHz	**88**

* The data in this table is based on a ±20 foot operating range

[1] *Each lot shipment of Click2Enter-I is specifically calibrated for its own unique gain/range settings. The Gain/Range column in Table 1 shows these base settings. Each production run may be different so always match the data in this table to the unit it was shipped with.*

The GAIN or RANGE setting feature of the C2E-I is based on a logarithmic scale not linear scale. What this means is that the settings change dramatically with each numerical step. The C2E-I will accept numbers from 0 to 255, however the actual functional or operational range will be somewhere between **50** on the low end to **100** on the high end. The default GAIN setting that each unit begins with is **100**.

Once the initial starting point for the GAIN/RANGE is established, it is recommended that increasing or decreasing the range should be in steps of 2 or 3.

Power Output

Another installation concept to consider is the lower power output of the hand held portable radio compared to the higher output power of the mobile transmitter radio. Should activation of the unit only be required via the hand held portable, then it is acceptable to set the operational activation distance to that particular unit.

If both portable and mobile radios are to be used, set the operation range of the portable radio first, then test the mobile's range. It is recommended that you never enable the portable handheld transmitter to operate at a range greater than the 20 feet based on the settings shown in **Table 1**. In some applications, due to radio wave propagation, the portable will not work at the same distance ratio as the mobile. In most applications, if the mobile radio operates at a setting of 100 feet, then the portable should operate at a range of 10 feet. These are arbitrary numbers, however they show the operational difference between the two different power outputs of units working off of the same frequency.

We recommend assigning a separate frequency and channel to be used with portable radios if the portable radios might be ignored based on the operational range of the mobile.

It is desirable to use the portables in conjunction with the mobiles. Assigning the portable units their own channel will allow greater control over the range of the Click2Enter-I. Remember that if the higher power mobile accesses the portable unit's different channel, it may open the gate at a further distance, thus causing an accidental or spurious activation or opening.

Option Relay

The option relay is provided for the installer/user so they can activate other devices when the this relay is enabled. This relay provides a short one-time (50mSec) contact which can be used for a multitude of things For example, if there is an alarm at the residential or commercial site, the installer could assign a circuit loop from the security alarm system to the option relay contacts. This would activate the alarm whenever the Click2Enter-I was activated, adding an increased security potential to the system.

Another feature of the second relay is realized when the “Dual-Relay” mode is enabled. When this function is enabled each of the two relays operates independently of each other. Thus two separate devices can be controlled with two separate frequency assignments. This feature is highly desirable in roll-up door applications.

Installation of the Click2Enter-I

OPERATORS WITHOUT BATTERY BACKUP

Install the Click2Enter-I where the top and bottom LED lights and the reflective sticker can be seen. Also, note that the logo is reflective for night identification so mount the Click2Enter-I in a visible location.

1. Install two wires from the appropriate transformer to the power terminals. Use the “Power In DC” block 12-24 V DC @ 500 mA power. The Click2Enter-I uses ≈198 mA in resting state and ≈268 mA in the latch state with applied 12V DC.
2. Install the two wires from terminal block “Gate (A)” (gate operation) on the Click2Enter-I to the keying relay terminal and the common terminal. The proper location on the operator terminal strip will be designated by the manufacturer’s instructions. This device needs to be set up as a keying and hold-open function. The Click2Enter-I should be connected to a fire switch terminal. NEVER connect the Click2Enter-I to safety or auxiliary terminals.

Note: In some cases, such as with the FAAC 401 MPS control panel, install two wires to the keying function and two wires to break the reversing terminals.

The Elite and Sentex operators should use the fire switch terminal and the common.

DoorKing should use the key terminal. This is usually #11 and common.

Note: **Be sure to check with your manufacturer instructions to identify proper terminals for hold-open activation.**

3. Terminal block "Option (B)" on the Click2Enter-I is used for an optional relay. You can then run wires to any low voltage load (up to 1 amp) that you wish to key. This relay does not have a timed function. If you need a timed relay for your auxiliary devices, you must install a timer circuit.
4. CAUTION: Damage may occur to C2E relays from systems using relays that deliver a high counter EMF. Click2Enter can ONLY accommodate micro-volt systems. Call for an isolation relay kit to protect C2E in high counter EMF applications (see product specifications at the end of this manual).

Note: The Click2Enter-I will not activate when power to the operator has failed. This condition will be shown by no visible Green power LED.

OPERATORS WITH BATTERY BACK UP (BUILT IN)

1. Hook up the power by connecting the Click2Enter-I terminal block "Power in DC" to a transformer rated at 12V DC to 24V DC @ 500mA. Set the operator to open automatically during a power failure situation. Once power is restored the gate and C2E-I will return back to normal operation.

   Battery back up systems have two modes of operation:

   - Open and hold open when there is a power failure. Install Click2Enter-I as recommended above.
   - Remains closed and opens when the radio control device has given the signal to open. It will stay open until the power comes back on. NOTE: This mode is NOT recommend by Click2Enter, Inc.

Note: **Consult your gate operator manufacturer for proper installation for battery back up systems.**

2. Exterior battery back up system.

   This is usually an inverter type system providing 110 VAC to the gate operator. With this type of system, you may connect the Click2Enter-I in the same manner as if there were no battery back up system.

Caution: Remember that in the case of the built-in battery back up system, there is no safety function during the power failure mode of operation. Therefore, the Click2Enter-I must be used only when the gate is visible and there are no obstructions or people present. Never bypass or disable any of the manufacturer gate safety systems or those required under the **UL325** guidelines.

Review of activation terminals

- Elite and Sentex Operators: Use fire switch terminal and common.
- DoorKing: Use keying terminals such as 11 and common.
- FAAC 401MPS: Use terminals 1 and 2 for key and break, and terminals 8 and 9 for hold open.
- Battery back up for built-in units: use normal DC transformer installation.

TIP:

USING SMALL DIAMETER WIRE OVER LONG DISTANCES CAN EFFECT UNIT OPERATION. ALWAYS CONSIDER AWG's BETWEEN 14 AWG TO 16 AWG

Final Comments Regarding C2E-I Power Requirements:

The C2E-I experiences significant problems with AC line noise that is passed into the radio receiver of the device. In some frequency bands the C2E-I can lock on a false noise signal which is not desirable. To provide optimal operation of the system ONLY use a 12V DC to 24V DC (any step) Regulated & Filtered @ 500mA power source. ALWAYS use a good quality surge protector to protect the C2E-I from unwanted voltage spikes.

4 Configuration

Overview

The Click2Enter-I is simple to configure. The door on the waterproof case can be opened by unscrewing the security screws.

Once the door to the Click2Enter-I is open, Serial Connect, Gate and Option Relays, and test button (D) can be accessed.

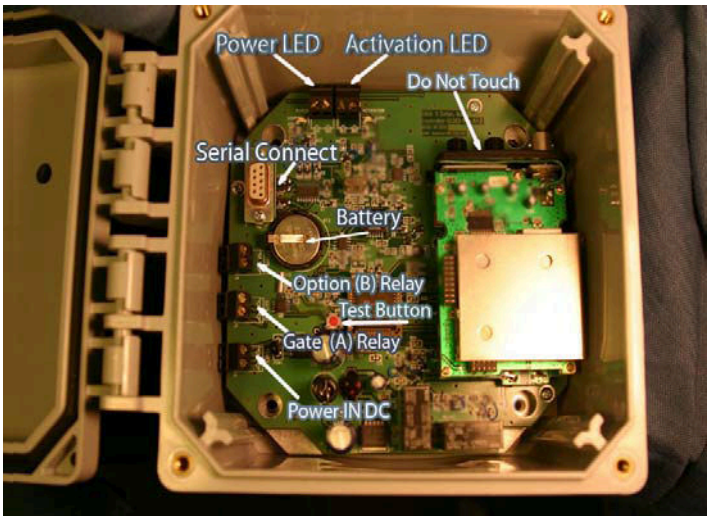

Figure 2. The Click2Enter-I System Board

Caution: DO NOT adjust the volume and squelch knobs, shown in Figure 2 “Do Not touch.” Both of these knobs are set at the factory and adjusting them will effect the squelch and will adversely effect the performance of the Click2Enter-I.

Enclosure Door Tightening Recommendations: The enclosure is rated as a NEMA 4X. When tightening the security screws, to secure the door, DO NOT over tighten. The best gauge to use, when tightening the security screws, is to tighten the screws so you can **slide a standard thickness business card** between the door/lid and enclosure base. Do not tighten so that the enclosure door and box base touch.

Table 2: Terminal Input Connections

Terminal Connection	*Connection Type*	*Description*
Option (B) Relay	Option Relay	Pulse on dry contact. Normally open relay
Gate (A) Relay	Gate Relay	Normally open dry contact relay: Assignable pulse on or timed hold open
Power IN DC	Power Input	Used to supply power (polarity not required) to the C2E-I: 12V DC to 24V DC @ 500mA

Battery

The Click2Enter-I comes with a built in five year manganese dioxide lithium battery. This battery backs up the time/date and history memory register. It should be replaced every (+/-) 5 years.

Test button

The test button toggles the unit to a test bank of frequencies so the installer can operate the system to receive radio signals.

Once the test button is pressed, the power LED will blink to indicate test mode is active and for approximately three minutes the unit will activate with any of the frequencies programmed into this bank. Once test mode times out, the Click2Enter-I will revert back to using the programmed operations channels in the main bank of frequencies.

RS-232 serial port

The RS-232 serial port connects the Click2Enter-I to a computer for programming purposes.

Password Access

Access to the Click2Enter-I programming mode is protected by three levels of passwords. The initial passwords are set when the unit is powered up for the first time. The default values for the unit are:

- Level 1: **123456**
- Level 2: **234567**

Level 1 is the lowest level and is used primarily by installers and other field personnel. Level 2 is intended for use by distributors or other wider use.

For example, the level 2 password may be the same for all units sold for system wide entry in a particular region or city. However, the level 1 password would be set to a unique value for individual unit access.

If the other two passwords are lost, Click2Enter, Inc. can access the unit through a factory override password. If this is necessary, please contact Click2Enter at (877) 939-3800.

Passwords can be from 1 to 15 characters in length. Level 1 ***must*** begin with the number 1 and level 2 ***must*** begin with the number 2 as shown above.

Test Mode

The Click2Enter-I has a special test mode feature. Test mode can be activated by pressing the button on the Click2Enter-I, or selecting the test mode command from the programming interface. Once activated, the power LED will blink until the unit returns to normal mode after approximately three minutes (via test button activation) or indefinitely via computer programming mode (key command “T”). Table 3 shows the frequencies which we have pre-programmed for you to use during test mode.

You can also enter your own user-defined test frequencies in any of the 50 available channel memories. 00 through 06 have been pre-assigned by the factory using the Family Radio Service frequencies. Any of those channels can be re-programmed as needed.

Table 3: Pre-Loaded Test Channel Memory

CH	*Frequency*	*PL Code*	*Gate Hold*	*Gain*	*Opt*	*Wait to Close*	*Pulse*
00	462.5625	None	0 Min	80	N	N	1
01	462.5875	None	0 Min	80	Y	N	1
02	462.6125	74.4	1 Min	80	N	N	1
03	462.6375	77.0	2 Min	80	Y	N	1
04	462.6625	79.7	0 Min	80	N	N	2
05	462.6875	82.5	1 Min	80	Y	N	2
06	462.7125	85.4	2 Min	80	N	N	2

5 Programming

Overview

Having multiple-user programmability answers the mutual aid problem that presently exists with other emergency access control products.

The Click2Enter-I is capable of operating with the most commonly used frequencies used by public safety agencies. See “Specifications” section for more information.

Note: As an added feature any standard radio’s frequency and tone (PL or DPL) may be entered into the Click2Enter-I to allow property owners, with their own commercial radios, to open the gate.

Programming the Click2Enter-I

Any terminal emulator such as HyperTerminal can be used to program the unit. If HyperTerminal is not installed with your MS Windows computer, it can be obtained from our website:

1. Click **Settings** > **Control Panel** from the **Start** menu.
2. Click **Add/Remove Program**s.
3. Click the **Windows Setup** tab.
4. Double-Click **Communications** from the component menu.
5. Select the HyperTerminal checkbox.
6. Click **OK**.

TIP:

VISIT OUR WEBSITE TO SEE HOW TO DOWNLOAD A COPY OF HYPER-TERMINAL

Note: See “Logging Onto The Unit” for HyperTerminal settings.

Note: MS VISTA no longer supports Hyper Terminal

Adding Frequencies to the Click2Enter-I

1. Once the necessary frequency and other operational information has been obtained from the public safety agencies, for the region or city of operation, base range settings can be obtained from **Table 1**. (see section “Initial System Setup Guidelines”)
2. Connect and log in to the Click2Enter-I using a standard male to female serial cable and a terminal emulator program. See the section titled “Logging On to the Unit.” Type **E** at the **C2E>** prompt and enter the frequency data.

Removing Existing Frequencies

If you need to remove a frequency from the Click2Enter-I, you must zero out the frequency from the assigned channel:

1. Enter the Click2Enter-I setup program (See section titled “Logging On to the Unit”) and select **E – Enter Channel Data**.
2. Enter the Channel number at the Channel prompt.
3. Use the **Backspace** key to remove the entire frequency data including the leading space at the frequency prompt.
4. Enter **0**, and press **Ente**r, the setup program will then clear the channel of all data.

Gain Settings

The gain must be set while entering the frequency into the unit. The gain setting allows the programmer to set the range of operation by adjusting the unit sensitivity. When programming the gain setting, always adjust to the **minimum distance** necessary for your application to prevent unwanted activations.

Note: It should be noted that the C2E-I default gain setting is 100. Greater distances of operation can be achieved by setting the unit gain above 100. Any gain setting beyond line of sight is considered a dangerous situation, potentially increasing the likelihood of accidental or unwanted activations of the system.

The gain can be set from 0 to 255. The actual gain swing typically programmed will be between 30 and 100. Most systems operate well within the gain setting of **40 to 90**. This typically allows for operational ranges of mobile radios between **80 Ft to 150 Ft.**

Warning: To protect the lives of people and pets, as well as to prevent property damage, do not set the gain to a level that allows for the operation of the gate beyond the line of sight.

Programming with a Personal Digital Assistant

A Personal Digital Assistant can be used to program the Click2Enter-I, using terminal emulator software and “null modem” adaptor. Visit our web site at www.click2enter.net or call (877) 939-3800 to learn more about this feature.

Logging On to the Unit

During Initial Power Up

Once the appropriate DC power is applied to the unit check to be certain that the Power LED (Green) is operational. If confirmed "ON" move onto the next step

During Normal Operation & Programming

To access the Click2Enter-I programming mode:

1. Connect a PC or serial-enabled palm top to the Click2Enter-I serial port using a standard 9-pin, male to female, straight through, serial cable (NULL MODEM will not work).
2. Run a terminal emulator such as Microsoft Windows HyperTerminal. HyperTerminal is found by:
   - Clicking on the START button
   - Then locate ACCESSORIES
   - Then COMMUNICATIONS
   - Then activate HyperTerminal
   - Then assign a NEW connection
3. The Click2Enter-I operates at:
   - **9600 bps**
   - **Eight data bits**
   - **No Parity**
   - **One stop bit**
   - **Xon/Xoff Flow control**
   - **Select APPLY then OK**
4. Press the **Enter** key to initiate the final handshake.

Note: The unit will not display anything on the terminal program until you press the **Enter** key. Also, if you save your initial session and assign a desktop icon you will not have to set-up HyperTerminal each time you want to log onto a C2E-I to program it.

5. Enter the password as shown below. For default password, see section titled "Password Access."

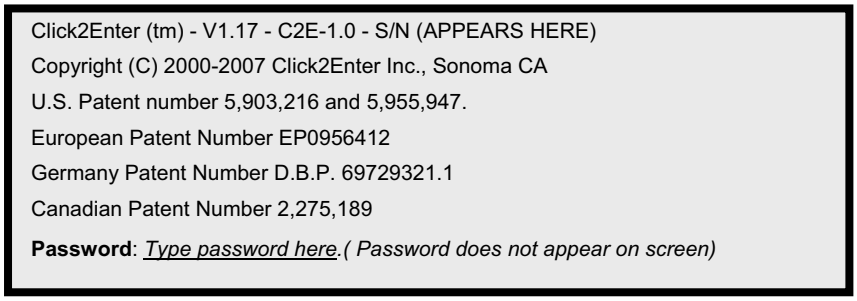
Click2Enter (tm) - V1.17 - C2E-1.0 - S/N (APPEARS HERE)
Copyright (C) 2000-2007 Click2Enter Inc., Sonoma CA
U.S. Patent number 5,903,216 and 5,955,947.
European Patent Number EP0956412
Germany Patent Number D.B.P. 69729321.1
Canadian Patent Number 2,275,189
Password: Type password here.(Password does not appear on screen)

Figure 4. The Program Screen Login Prompt

Note: When the programmer leaves Click2Enter-I idle for approximately three minutes, a time-out feature causes the unit to default to asking for the re-entry of the assigned password.

If you enter the password correctly, the maintenance command prompt shown below appears:

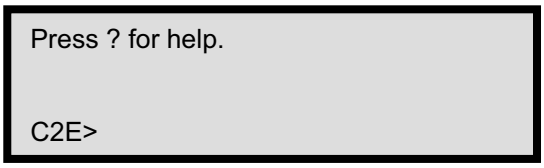

Figure 5a. The Primary Programming Screen Command Prompt

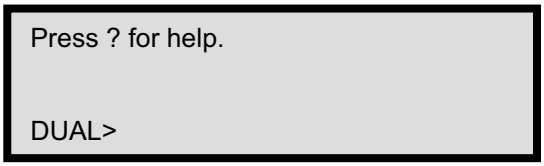

Figure 5b:The Primary Programming Screen Prompt For Independent Relay Control Function

Independent Relay Control:

The “DUAL” feature or “Change Dual Gate Mode” function, as seen in figure 6, is activated by typing “B” on the command prompt line. Once initiated the command prompt changes from the C2E> to DUAL> as seen in figure 5b. Once in this mode you can assign independent control of both the Gate (A) and Option (B) relays. Note: You will only be able to assign a “pulse only” (500mSec.) function to either of the two relays. To return to the regular programming mode just type “B” again and the prompt will return to the familiar C2E>.

Programming Commands

Enter the **?** command to list the following maintenance commands.

```
C2E> ?

A - Adjust gain for a channel
B – Change Dual Gate Mode
C - Complete Program Listing
D - Set Date & Time
E - Enter Channel Data
G - Toggle Gate Relay
H - List Activation History
L - List Channels
O - Toggle Option Relay
P - Change Passwords
R - Reset
S - Status Report
T - Toggle Test Mode
X - Exit Programming Mode
Y - Copy Test Channels
Z - Erase Channels
```

Figure 6. Viewing the List of Programming Commands

A This command allows the programmer to bypass all other programming steps and go directly to the "Gain" (range) setting step. Thus, making it easier to adjust the operating range once all other information has been entered.

B This command switches the C2E-I so that it can independently control the Gate (A) and Option (B) relays. This typically used to control two separate devices or roll-up doors with two separate frequency assignments.

C This command will list the 50 event activation history (date, time and channel of activation), the test channel register (0-49 channels) and the activation channel register (0-49 channels).

D This command sets the time and date of the on-board clock chip. The data must be entered ***exactly*** in the form: mm/dd/yyyy hh:mm. For example, "01/03/2004 18:43."

Note: Time is in 24 hour format.

E This command allows the operator to enter data for a specific channel.

```
C2E> E

Channel: 1
Frequency: 462.5750
Mode (C/P/D): P
PL Code (0 = auto):  69.3
Gain: 100
Momentary gate relay (Y/N): N (default)
Gate mode (S/M/H/?): M (default)
Gate open minutes (1-59): 01 (default)
Latch open & hold: N (default)
Option control (Y/N): N (default)
Single pulse mode (Y/N): N (default)

C2E>
```

Figure 7a: Entering Channel Data (Momentary gate relay enabled N screen)

```
C2E> E

Channel: 1
Frequency: 462.5750
Mode (C/P/D): P
PL Code (0 = auto):  69.3
Gain: 100
Momentary gate relay (Y/N): Y (50mSec PULSE)
Option Control (Y/N): N
Single pulse mode (Y/N): N

C2E>
```

Figure 7b: Entering Channel Data (Pulse Only Screen)

- **Frequency:** Enter a frequency at the Frequency prompt. To remove or zero a programmed frequency, see section titled “Removing Existing Frequencies.”
- ***Note:*** At least three digits, after the decimal point, must be entered into the frequency space.

- **Mode:** Select the channel Mode by entering one of the following:

  C Carrier-only operation
  P PL tone activation
  D DPL code activation

- **Code:** Enter the DPL or PL coding that are supplied by the public safety agency. The DPL and PL coding can also be auto-loaded by selecting PL/DPL Code **0**. If auto-load is selected, be sure to have the public safety agency test the unit for proper operation.

Note: When entering a DPL Code, you must add a "D" prior to the number as shown in **Figure 7a** above. For PL codes, just enter the number without a preceding letter.

- **Gain:** The base setting for Gain varies with each production run. Range settings typically run between **30** & **100**. When increasing or decreasing range stepping **2** to **3** increments at a time is recommended. The units default setting for gain is **100**. See **table 1** for base gain settings.
- **Momentary gate relay (Y/N):** Enter the length of time the gate will stay open before it automatically closes. This feature is defaulted to the ON position, and 01 MIN. Thus, if you select N to the "Momentary gate relay" you will be asked to choose one of the three following time modes:
  1. M = Gate open minutes (1-59)
  2. H = Gate open hours (1-15)
  3. S = Gate stays open, unit must be reset to close. If this feature is selected the unit will hold the gate open indefinitely. To reset either open the unit and push the "TEST" button and the unit will reset in approximately 3 min. or turn the system power OFF and this will reset to normal operation.
- **Latch open & hold (Y/N):** Enter **Y** at the Wait For Close prompt to enable the C2E-I to hold the gate open. When activated the C2E-I will not allow an override closure, it will defer to the countdown timer. While enabled in this mode the C2E-I will not accept another activation request. The "Activation LED" will blink at a 50% duty cycle during the pre-set time period.

- **Option Control (Y/N):** Enter **Y** at the Option Control prompt to enable the option relay. For more information on the option relay, see section titled "Option Relay."
- **Single pulse mode (Y/N):** The C2E-I is defaulted to the "double pulse" mode. To enable the "single pulse" mode answer **Y** in the assigned space. The following message appears:

  You are about to change the operation of this unit from double-pulse to single-pulse activation mode. Accidental activation is more likely in this mode.

  Proceed? Y (default)

G This command changes the state of the Gate relay for testing purposes, allowing field service personnel to check the wiring of the Gate relay (activates relay).

H This command lists the 50 most current entries stored in the activation history log.

L This command lists the contents of the channel memory. NOTE: Only the programmed channels will show, all empty memory registers will not list.

O This command changes the state of the Option relay for testing purposes, allowing field service personnel to check the wiring of the Option relay (activates relay).

P This command allows the user to change passwords. At level 1, only the level 1 password can be changed. At level 2, the level 1 and level 2 passwords can be changed. *See Figure 8 below*.

```
C2E> P

 Password level: 1
   New Password: 123456
    Enter again: 123456

C2E> P

 Password level: 2
   New Password: 234567
    Enter again: 234567
          (Typical error messages)
Invalid password or passwords don't match.
Installer password must start with a '1'.
Distributor password must start with a '2'.

C2E>
```

Figure 8. Changing Passwords

Level 1 ***must*** begin with the number 1 and level 2 ***must*** begin with the number 2, as shown in Figure 8 above. See section titled “Access Control.” The previous example shows the original factory override passwords.

R The reset command resets the Click2Enter-I to a normal operating status as follows:

- Test Mode is cancelled
- The gate is closed
- The option control is deactivated

S This command lists the current state of the Click2Enter-I.

T This command toggles the test mode on or off. See section titled “Test Mode.”

X This command exits from the programming mode access to the Click2Enter-I. The maintenance mode terminates automatically if no commands are entered within approximately three minutes.

Y This command is for Click2Enter, Inc. use only.

Z This command erases all channels.

6 Specifications

Memory Channels	
Main Bank 50	Test Bank 50
Spurious Rejection	FM at 154 MHz 40 dB
Selectivity	± 10 KHz @ -6 dB ± 18 KHz @ -50 dB
IF Interference Ratio	257.5 MHz at 154 MHz @ 50 dB 21.4 MHz at 154 MHZ @ 100 dB
Scanning Rate	25 channels/sec.
IF Frequencies	**257.5 MHz, 21.4 MHz, and .455 MHz**
Current Demand Nominal Conditions	**≈198 mA at idle** **(±10%) 268 mA during activation with large LED in ON condition and gate relay in latch condition**

Frequency Coverage

Frequency	Step	Mode
29 – 54 MHz	5 KHz	FM
137 – 174 MHz	5 KHz	FM
380 – 512 MHz	12.5 KHz	FM
806 – 960 MHz	12.5 KHz	FM

Aircraft (AM) Bands Covered

Max. Current at Relay Gate 1 A Option 1 A Working Voltage 50V DC MAX	CAUTION: Damage may occur to C2E relays from systems using relays that deliver a high counter EMF. Click2Enter can ONLY accommodate micro-volt systems. Call for an isolation relay kit to protect C2E in high counter EMF applications.
Power Requirement	12V DC to 24V DC @ 500 mA
Operating Temperature	**(-10ºC to +60ºC) or (14ºF to 140ºF)**
Dimensions	6” x 6” x 4” (HWD)
Weight	≈2.9 lbs.

7 Click2Enter, Inc. Limited Warranty

Click2Enter, Inc. (Click2Enter) warrants the Click2Enter-I (Product) only to be free from defects in material and workmanship under normal use and service for a period of either one year after the date of purchase by the original customer or eighteen months from date of factory shipment, at the discretion of Click2Enter, Inc.

Click2Enter's sole obligation under this warranty is limited to repairing or replacing, at our discretion, any parts which shall be determined by Click2Enter to be defective, and is conditioned upon the original customer giving notice of any such defect to Click2Enter within the warranty period. Click2Enter reserves the sole right to make the final decision whether there is a defect in materials and/or workmanship, and whether or not the product is within the warranty period. Click2Enter is not responsible for any damages or other cost/s proximately caused by, or which may result from installation, handling, non-recommended operation abuse, or modifications not authorized by Click2Enter for any damages which may arise out of use of the Product.

This warranty shall not apply to any Click2Enter product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished including improper installation or connection to an improper voltage source, or products damaged by Acts of God (lightning strikes, power surges, floods, fire, natural disaster) or extended to units which have been repaired or altered outside of the factory.

Click2Enter, Inc. reserves the right to make changes or improvements to our products without incurring any obligation to similarly alter products previously purchased.

The warranty represents "DEPOT SERVICE" and specifically excludes any costs associated with the troubleshooting, removal, shipment, and reinstallation of Click2Enter unit(s). All repairs must be made at the factory or place designated in writing by Click2Enter. Any product must be returned to Click2Enter with a Return Merchandise Authorization (RMA) number prominently marked on the outside of the package. To obtain an RMA, contact Click2Enter, Inc. by calling toll free **877-939-3800**; or by writing Click2Enter, Inc. P.O. Box 1532 Sonoma, California 95476; or via the world wide web at www.click2enter.net. Freight will be paid by the party seeking warranty service and units shipped freight collect will be refused. Click2Enter will pay freight on our return of repaired or replaced items in warranty using a shipping method similar to the one used to send the original unit to Click2Enter, Inc.

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